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Corrigendum

Corrigendum to “A comparative analysis of well-to-wheel primary energy demand and greenhouse gas emissions for the operation of alternative and conventional vehicles in Switzerland, considering various energy carrier production pathways” [Journal of Power Sources 249 (2014) 333–348]



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The authors regret that there were footnote reference errors in Table 5 of the article. The correct footnote references are given in the table below.

Hydrogen production process		Process input						Hydrogen output	Process efficiency
		Electricity	Heat (nuclear)	Solar energy	Natural gas (methane)	Coal (carbon)	Biomass		
Electrolysis	Low temperature electrolysis [14]	0.192 GJ/kg _{H2} ^a (100%)						0.12 GJ/kg _{H2} ^b	62.50%
	High temperature electrolysis [15]	0.119 GJ/kg _{H2} (83%)	0.025 GJ/kg _{H2} (17%)					0.12 GJ/kg _{H2} ^b	83.30%
Thermochemical dissociation [40]	Solar thermal dissociation	7439 GJ/a (2%)		346,984 GJ/a (98%)				100,300 GJ/a ^c	28.30%
Photobiological splitting [19]	Direct – Hydrogenase			1408 kJ (100%)				572.5 kJ	40.70%
	Direct – Nitrogenase			2816 kJ (100%)				572.5 kJ	20.30%
	Indirect – Hydrogenase			2112 kJ (100%)				572.5 kJ	27.10%
	Indirect – Nitrogenase			3520 kJ (100%)				572.5 kJ	16.30%
	Coal gasification [23]					0.271 GJ/kg _{H2} ^{a,b} (100%)		0.12 GJ/kg _{H2} ^b	44.30%
Gasification	Biomass gasification [41]	0.006 GJ/kg _{H2} (2%)			0.006 GJ/kg _{H2} ^b (2%)		0.251 GJ/kg _{H2} ^{a,b} (96%)	0.12 GJ/kg _{H2} ^b	45.60%
		0.002 GJ/kg _{H2}			0.165 GJ/kg _{H2} ^b			0.12 GJ/kg _{H2} ^b	71.90%

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(continued)

Hydrogen production process		Process input							Hydrogen output	Process efficiency
		Electricity	Heat (nuclear)	Solar energy	Natural gas (methane)	Coal (carbon)	Biomass	Ethanol		
Steam reforming	Steam methane reforming [42]	(1%)			(99%)					
	Steam ethanol reforming [43]	0.009 GJ/kg _{H2}						0.176 GJ/kg _{H2} ^{a,b} (95%)	0.12 GJ/kg _{H2} ^b	64.90%
Partial oxidation [26]		(5%)			0.804 MJ/kg _{H2} ^b (100%)				0.721 MJ/kg _{H2} ^{b,d}	89.70%
					0.804 MJ/kg _{H2} ^b (100%)				0.438 MJ/kg _{H2} ^{b,e}	54.50%

^a Current value based on 2005 study.
^b Based on lower heating value (LHV) of hydrogen.
^c Based on higher heating value (HHV).
^d Output based on the assumption of 100% reactant conversion.
^e Output based on the assumption of 60.8% reactant conversion.